



10/074917 # 13/B

Please cancel the 10 claims in the original application and replace them with the claims submitted here. Numbering will start with Claim 11.

We claim:

<sup>21</sup>  
11. (new): A rotation support apparatus for a heat-dissipation fan, comprising:

- a. a hollow tubular bearing <sup>2</sup>, fixedly and concentrically mounted to <sup>100</sup>the rotor of said fan, *ante*  
b. a hollow tubular bearing <sup>4</sup> fixedly mounted to the base of said fan, *ante*  
*pl.*  
*ante*

5 in such a position on said fan base, so as to form a linear tubular opening when said fan rotor is placed next to said fan base for normal fan operation;

c. a cylindrical axial tube <sup>6</sup> of sufficient length to fit through the bearing mounted to said rotor and the bearing mounted to said fan base, with sufficient excess length to allow the end of said axial tube to protrude from said fan base when the other end of said axial tube is placed loosely against the bearing mounted to said fan rotor; and

10 d. a retaining ring <sup>8</sup> placed around said axial tube at the end of said axial tube which protrudes from said fan base.

<sup>22</sup>  
12. (new): The apparatus as in Claim <sup>21</sup>11, in which said axial tube is not fixedly attached to either of the aforementioned bearings, but is permitted to rotate freely within the space available to it when it is received by the two aforementioned bearings.

<sup>23</sup>  
13. (new): The apparatus as in Claim <sup>22</sup>12, in which the separation between the exterior surface of said axial tube and the interior surfaces of the two aforementioned bearings is ten microns or less.

<sup>24</sup>  
14. (new): The apparatus as in Claim <sup>21</sup>11, in which said axial tube further comprises a flange at one end thereof, for placement in proximity with the rotor of said fan, said flange serving to provide a loose fit between said fan rotor and said axial tube.

<sup>25</sup>  
15. (new): The apparatus as in Claim <sup>24</sup>14, in which said the exterior surface of said axial tube is of a concave shape or grooved, to reduce friction between said axle tube and the bearings which receive it.

alt.

Fig-4

<sup>26</sup>  
16. (new): The apparatus as in Claim <sup>21</sup>11, in which said retaining ring contains an opening or gap.

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<sup>27</sup>  
17. (new): The apparatus as in Claim <sup>21</sup>11, in which all components mentioned in Claim 11 are made of ceramic material.

<sup>28</sup>  
18. (new): The apparatus as in Claim <sup>37</sup>17, in which said ceramic material is composed of aluminum oxide, zirconium oxide, silicon oxide, or a combination of any and all of these materials.

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<sup>29</sup>  
19. (new): A rotation support apparatus for a heat-dissipation fan comprising: a bearing

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fixedly mounted to (the rotor) of said fan, a bearing fixedly mounted to the base of said fan, an axial tube which fits inside said bearings, and a retaining ring which holds said axial tube in place, where the improvement consists of the ability of said axial tube to rotate freely when it is placed inside said bearings, with the result that said axial tube rotates slowly and asynchronously with the rotor of said fan when said fan is in operation.

disconnected